Iowa Medicaid Enterprise State Medicaid HIT Plan

February 2022

V10.0

Change History

Date:	Changed By:	Changes:	Version:
9/08/2010	Jody Holmes Kelly Peiper Dane Pelfrey	Completed version 1.0 for submission to CMS	1.0
11/08/2010	Kelly Peiper Dane Pelfrey	Updated SMHP per Appendix Y - CMS SHMP Approval letter dated Oct 12, 2010 – Enclosures A & B	1.1
7/14/2011	Jody Holmes Kelly Peiper	The Medicaid enrollment numbers and graphs have been updated. Strategic Planning section has been updated to reflect current status. HIE Background has been updated to reflect ONC grant. Update on the Regional Extension Center progress. Section A has been updated to reflect the most recent assessment information. A section was added on the Community College Consortium. Section B was updated to reflect current information from additional planning for the Health Information Exchange by the stakeholder group. Section C has been updated to note the Iowa progress on the EHR incentive program. Section C now includes lessons learned. Section C process flows have been updated to reflect changes made to the process following implementation. Section D has been modified to identify changes to the pre-payment audit strategy. The section E roadmap has been updated to reflect new timelines and notes which tasks have been completed. Each section has been reviewed and a status update note added to reflect progress on the goals and action items. The tables with	2.0

		specific timelines have been updated to reflect the shift in deliverable timeframes. Appendix. The sections from the Iowa e-Health strategic and operational plan have been removed. The updated plan can be reviewed at www.iowaehealth.org The project abstract for the immunization and lab grants have been removed. The hospital calculator has been updated The Iowa Administrative Code rules section has been updated to reflect the current rules. The provider agreement has been included as appendix F, including the PA addendum. Appendix G has been added to show the providers who have expressed interest in participating in the HIE, by provider type. Appendix H has been added to show the questions for Meaningful Use attestation.	
9/19/2011	Jody Holmes	Modify Appendix F, to clarify language in sections II and IV	2.1
8/01/2012	Kelly Peiper	Annual update Updated hospital calculator Modify language in Section C to reflect current processes	3.0
9/13/2013	Jody Holmes Rachel Lunsford	Annual update Modified background to reflect the new Iowa Health and Wellness Plan Added State Innovation Model Design to the Background Updated Section A with general updates on as-is landscape and specific updates on AIU and MU rates Updated Section C to reflect stage 2 changes Modified language in Section D to reflect changes requested in a letter dated December 4, 2012, regarding changes to Iowa's comprehensive audit strategy	4.0

		Updated strategy to reflect changes to Stage 1 and new Stage 2 rules Defined audit approach for each meaningful use measure Provided auditor checklists Define risk pools for audit strategy Indicated state use of E7/E8 process Updated Section E to reflect shift in strategy for technical assistance and provided general updates in our roadmap	
11/21/2013	Rachel Lunsford	Included the summary of the Stage 2 Regulations Changes which starts on page 77 in the clean version and 107 in the marked up version.	4.1
7/21/2014	Tanya McAninch Carrie Ortega	Added screen shots of audit templates Updated screen shots to reflect current requirements for Stage 1 & Stage 2 Added languages of E7 (audit) Defined risk categories total 5% of previous quarter broken down into -50% high, 30% mod, 20% low Put into production for providers to attest for stage 1 and stage 2 Removed Section D – Iowa's Incentive Payment Audit Strategy to a separate document.	5.0
9/25/2015	Carrie Ortega	Updated Iowa Medicaid Enterprise background section, Updated Section A: to include broadband maps as well as EHR adoption and return rates for AIU and MU, included IHIN updates, updated number of eligible providers enrolled in Medicaid and licensed eligible providers in the state of Iowa, elaborated on hospital program participation, included CEHRT information. Section B: Change on horizon with IHIN and MCOs, addition of next 12-15 months plan. Section C: Included 2014 flexibility rule.	6.0

		Section E: Updated 2014-2016 actions and status.	
1/2016	Carrie Ortega	SMHP Addendum to support 2015-2017 Modifications and Stage 3 Final Rule published on October 16, 2015.	
2/2017	Carrie Ortega	SMHP addendum to support final rule, the 2015-2017 Modifications and Stage 3 Final Rule published on October 16, 2015, the Outpatient Prospective Payment System (OPPS) rule published on November 14, 2016, and the MACRA/MIPS Final Rule issued on October 14, 2016.	
10/2017	Carrie Ortega	SMHP Section D updates	7.0
10/2019	Carrie Ortega	Updated: Rebaselined SMHP As-Is, To-Be, HIT Roadmap, updates to all sections (A-E)	8.0
10/2020	Carrie Ortega	Minor updates throughout document Section A includes information regarding the final environmental scan Section C includes a timeline of administrative closeout activities.	9.0
1/2021	Carrie Ortega	Addition of Process for Public Health Data Registry Collection via HIE Corrected count of FQHCs attesting for MU and AIU	9.1
1/2022	Carrie Ortega	Program Closeout updates made to meet the final SMHP requirements. Includes final environmental scan information	10.0

Table of Contents

1 Document Purpose

The Iowa Medicaid Enterprise (IME) updates the State Medicaid Health Information Technology Plan (SMHP) as a deliverable to the Centers for Medicare and Medicaid Services (CMS) to describe operations of Iowa's Promoting Interoperability Program (formerly known as the Electronic Health record or EHR incentive payment program). This SMHP serves as the IME's strategic Health Information Technology (HIT) planning document for the HITECH program. This final SMHP update describes how IME will closeout program administration activities, as authorized under section 4201 of the American Reinvestment and Recovery Act (ARRA), and report on program progress.

The IME recognizes that funding of individual projects and technologies within this document may come from different sources – Medicaid Management Information System (MMIS) Funding, HITECH Funding, State Funding Grants, etc. Funding for individual projects was determined as part of the project planning and kickoff activities.

1.1 Key Stakeholders

Elizabeth Matney, Iowa Medicaid Director

Iowa Medicaid Enterprise Policy and Contracting Staff

IME Members

IME Providers

1.2 Audience

Centers for Medicare and Medicaid Services (CMS)

Iowa Department of Human Services (DHS)

Iowa Department of Public Health (IDPH)

Iowa Health Information Network (IHIN)/CyncHealth

Office of the National Coordinator for Health Information Technology (ONC)

1.3 Iowa Medicaid Enterprise Program Background

Medicaid is an entitlement program designed to provide medical care to low-income individuals who are aged, blind, or disabled, pregnant, under 21 years of age, or members of a family with dependent children. The program was authorized under Title XIX of the Social Security Act of 1965. The Medicaid program is funded jointly by the state and federal governments.

To be eligible for Medicaid, individuals must be low-income and fall into one of the federally mandated categories: children, frail elderly, disabled persons, pregnant women, or very low-income parents. The Iowa Medicaid Enterprise (IME) is responsible for administering the Iowa Medicaid Program.[1] It exists under the Iowa Department of Human Services and is staffed with state employees and professional services vendors, who work cooperatively with the Department staff to perform the Medicaid functions.[2]

Iowa Medicaid has three main coverage groups:[3]

- IA Health Link (managed care program)
- Medicaid Fee-for-Service
- Hawki (Healthy and Well Kids in Iowa)

Most Iowa Medicaid members are enrolled in the IA Health Link managed care program. These members receive health coverage from a Managed Care Organization (MCO) they choose. Hawki members receive their benefits through an MCO they choose. Some members continue to receive Medicaid Fee-for-Service. The Iowa Health and Wellness Plan[4] provides comprehensive health coverage at low or no cost to Iowans between the ages of 19 and 64; eligibility is based on household income.

[1] See https://dhs.iowa.gov/ime/about for more information on Iowa Medicaid Enterprise
[2] Iowa Medicaid Enterprise Units https://dhs.iowa.gov/ime/about/aboutime
[3] See https://dhs.iowa.gov/ime/members/who-receives-medicaid for more information on coverage groups
[4] See https://dhs.iowa.gov/ihawp for more information on Iowa Health and Wellness Plan

2 Section A: Iowa's "As-Is" HIT Landscape

This overview of Iowa's "As-Is" HIT landscape describes the level of Health IT adoption by Iowa's health care providers.

2.1 Electronic Health Record (EHR) Adoption

This section contains information about multiple survey results, Promoting Interoperability Program participant incentive payments, and EHR adoption.

2.1.1 Survey Results – EHR Adoption and Use, Health Information Exchange

This section contains information about surveys conducted over the years and provides the results.

2.1.1.1 2010 Environmental Scan

In 2010, the IME conducted provider surveys in collaboration with Iowa e-Health to understand the barriers and utilization of EHR in Iowa.[5] Surveys were developed and reviewed by e-Health workgroups and the IME staff. The IME promoted the surveys through meeting with professional organizations and utilizing our existing provider outreach processes. Additional provider types, including home health care, long term care, laboratories, and pharmacies were included in the surveys.

2.1.1.2 2015 Environmental Scan

The IME conducted a second environmental scan in 2015.[6] The scan showed how health IT adoption evolved over the five years between scans in the state of Iowa among Promoting Interoperability Program Eligible Providers, Eligible Hospitals, and Eligible Providers who are dentists; who had received at least one program incentive payment. The results provide general patterns and trends. The survey results provide insight to the IME on where providers and hospitals participating in the program show progress or lack thereof in the adoption and use of health information technology and health information exchange or interoperability.

2.1.1.3 2013 – 2018 Provider Enrollment HIT Survey Results

The IME's provider portal was enhanced in 2013 to survey providers regarding their EHR implementation and meaningful use status and future plans. This survey is collected as part of provider re-enrollment process cycle which is every five years. The HIT Provider Enrollment Survey allows Iowa to continue to monitor EHR adoption progress within the state on an ongoing basis, beyond those providers who are receiving incentives. Provider re-enrollment launched in May 2013. Results were calculated for the provider portal survey in July 2014.

- 16,114 providers responded to questions about EHRs and health information exchange as part of the re-enrollment process
- 83% responded that they currently used electronic health records

[5] More information regarding the 2010 assessment can be found here: http://ppc.uiowa.edu/health/study/e-health-baseline-assessment-health-information-technology-use-providers-iowa

[6] Information regarding the 2015 HIT Landscape can be found at http://ppc.uiowa.edu/publications/iowa-health-information-technology-and-meaningful-use-landscape-2015

- Providers that responded affirmatively to using an EHR, 91%, are using a certified EHR
- For those who responded that they didn't use an EHR, we asked if they had plans to purchase one. While just under half had plans to purchase an EHR in the next five years, 58% of providers responded that they did not have any plans to purchase an EHR.
- Responses to health information exchange connections include 34% of providers have no plans to exchange health information, 11% connected to IHIN, 17% will connect within 1 year, 16% will connect within 2-3 years

Provider re-enrollment, which began in November 2015 and continued throughout 2016, due to MCO implementation, once again included the EHR adoption survey as part of the process. The survey was updated to capture additional information. Results were captured and reported in February 2017, with the most recent results reported through December 2018.[7]

Key Outcomes:

- More than 70% of respondents use an EHR
- An average of 75% of respondents that currently have an EHR, use a CEHRT
- The majority of respondents who are using CEHRT reported using 2014 and 2015 versions of CEHRT. 7% or less of respondents use 2011 CEHRT.
- An average of greater than 70% of respondents participate in the Promoting Interoperability Program
- The majority of respondents are NOT connected with the Iowa Health Information Network (IHIN)
- Majority of respondents are NOT connected with any HIE
- An average of greater than 70% of respondents do not want to submit eCQMs to the IME

2.1.1.4 2017 Environmental Scan and Key Informant Interviews

In 2017 IHIN, through the HITECH IAPD, conducted an Environmental Scan Survey and Key Informant Interviews Qualitative scan. The surveys included the following provider types:

- Home Health Agencies
- Long Term and Post-Acute Providers
- Hospices
- Rural Health Clinics and Federally Qualified Health Centers
- Assisted Living

The objective of the survey was to determine the information technology capabilities and scope of electronic exchange of health information in the current state and within the next two years. Conclusions from the survey included:

[7] See https://dhs.iowa.gov/ime/providers/tools-trainings-and-services/medicaid-initiatives/EHRincentives for the Provider Enrollment survey results.

- A large proportion of the providers were already using an EHR
- Many providers were already engaging in some form of electronic information exchange, even if it was only with hospitals/providers within their own network/organization, and access was “read only”
- Four types of providers (not Assisted Living) reported a fair amount of data reporting and Clinical Quality Initiatives (CQI), which requires collating and electronic submission of clinical information to regulators/payers
- Providers generally agreed that HIE would benefit their patients

Emerging themes from the Key Informant Interviews included:

- EHR adoption low in some settings
- Most data sharing between settings uses paper record transfer
- Large information system vendors are used by larger health systems, but electronic exchange outside of those systems is limited
- Portals are becoming the norm for view only data sharing
- Health information exchange concepts not well understood, and in many cases misunderstood
- Even when information exchange capabilities exist, they are seldom fully implemented, operationalized or generalized creating information silos
- Admission, discharge and transfer alerts are desired, however, when available are not well integrated into workflow
- Most care coordination services use manual work methods to accomplish broad responsibilities
- Significant number of organizations are participating in alternative payment models, but few have technical infrastructure needed to accomplish goals of accountable care
- Merit-based incentive Payment System (MIPS)/meaningful use (MU) attestation is a top priority for organizations

Recommendations included:

- Education and technical assistance relevant to care coordination, information exchange, and infrastructure needed for Alternative Payment Models which focus on capabilities to communicate, collaborate, and coordinate care
- Process improvement activities to standardize workflows tailored to unique care settings, metrics, and dashboards for tracking progress and success
- Technology: identify funding or policy mechanism to drive adoption of EHRs in Long Term Care (LTC) setting, use-case driven roadmap strategy, Consolidated Clinical Document Architecture (CCD-A) use needed for care coordination, and implement technology tools that support care coordination such as timely data streams, registries, tracking, monitoring, statistical risk-adjustment, and visualization dashboards

2.1.1.5 2017 SIM Current State of HIT in Iowa Report

Under the State Innovation Model (SIM) Grant, the IDPH used survey report information above and the overview of HIT systems operating in the state inventory

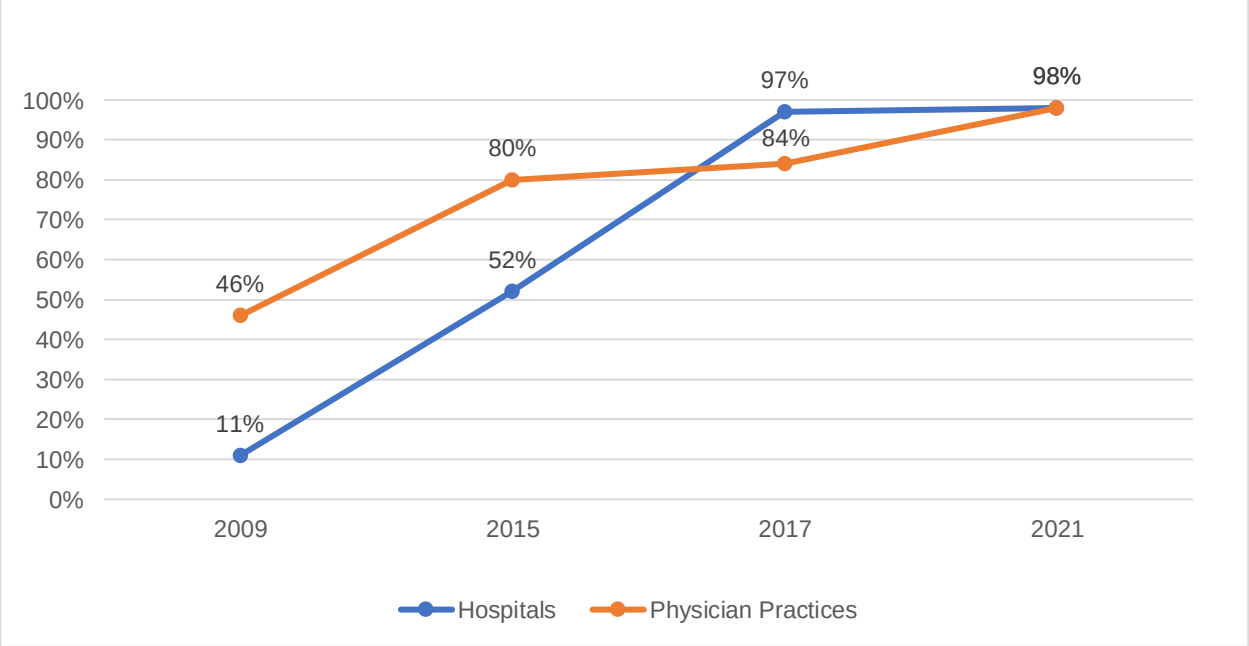
captured under SIM to compile a summary report of the state of HIT in Iowa.[8] Summaries for the state of HIT in Iowa include financing, governance, and sustainability.

The following conclusion was drawn in the report:
Long term sustainability of health information technology and health information exchange will be made possible if ALL provider systems participate, if additional provider types (behavioral health, long-term care, pharmacy, etc.) connect to participate in exchange of information and if additional use cases can be identified to the benefit of the patient, provider and payer.

2.1.1.6 2020-2021 Final Environmental Scan and Key Informant Interviews

Between October 2020 and December 2021, a new environmental scan was conducted. The environmental scan included review of previously collected HIT information, a new survey, and key informant interviews. The final report includes longitudinal information to assess the beginning through the end of the Iowa Medicaid Promoting Interoperability Program. The 2021 final reports are available on the Iowa DHS website.[9] One item of note within the final HIT Environmental Scan report[10] is the change in EHR use over time for Iowa clinics and hospitals, illustrated below.

Figure 1 EHR Use - Trend



[8] 2017 IDPH The Current State of HIT in Iowa SIM Grant https://idph.iowa.gov/Portals/1/userfiles/138/HIT%20Report%20FINAL.pdf

[9] DHS HIT and Promoting Interoperability Program website https://dhs.iowa.gov/ime/providers/tools-trainings-and-services/medicaid-initiatives/EHRincentives

[10] Final HIT Environmental Scan https://dhs.iowa.gov/sites/default/files/FinalReport_12302021_FINAL.pdf

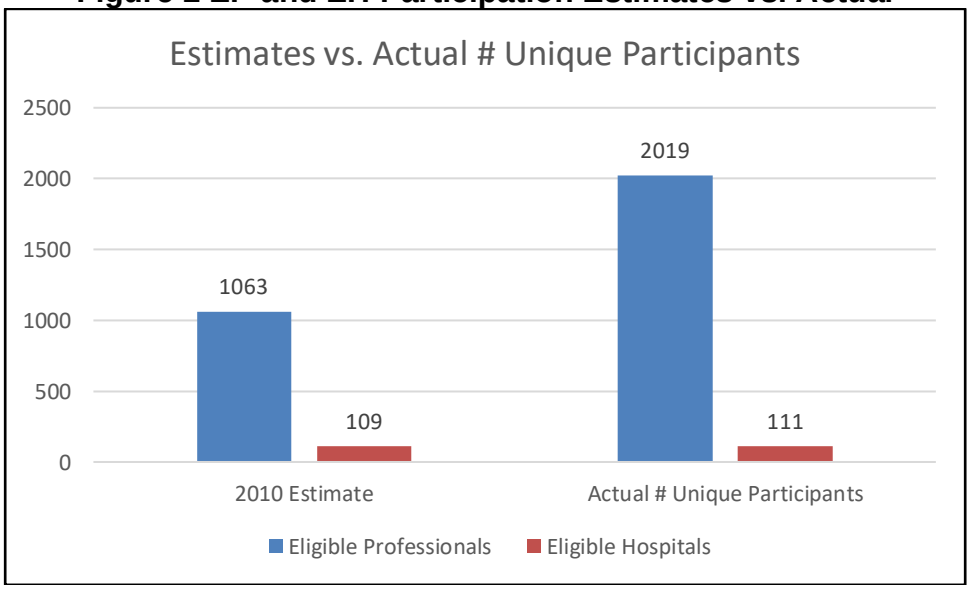
- The percentage of Iowa hospitals using an EHR in both inpatient and outpatient settings changed from 11% in 2009 to 98% using a certified EHR currently– an improvement of 87%
- Similarly, the percentage of Iowa physician practices using an EHR changed from 46% in 2009 to 98% using a certified EHR in 2021 – an improvement of 52%

This indicates that overall, EHR adoption throughout Iowa clinics and practices has been successful over the past ten years.

2.1.2 Iowa Medicaid Promoting Interoperability Program Provider Targets & Attestation

At the beginning of the program the IME informally estimated that approximately 10% of Eligible Professionals would meet the Medicaid encounter requirements. The IME determined a rough order of magnitude estimate that approximately 1,200 eligible providers would meet the Medicaid encounter requirements. The rough order of magnitude was assumed accurate within a range of -50% to +200%. The IME estimated about 90% of hospitals would be eligible for the program.

Figure 2 EP and EH Participation Estimates vs. Actual



The IME continued its efforts to assist providers through each year and stage of the program**,** providing outreach to Eligible Professionals and Hospitals to attest to the Promoting Interoperability Program primarily through email and direct phone calls. A specific outreach program for dentists was implemented in 2016, including a webinar series to assist dentists in moving onto meaningful use of the EHR. The dedicated DHS HIT & PI Program website has been kept up to date as program requirements and tools changed over time. As 2016 was the last chance for providers to initiate participation in the program, there was a significant amount of outreach performed to assist providers and hospitals who had not yet entered the program. The following figure shows the number of unique EPs and EHs to have participated in the Iowa Medicaid Promoting Interoperability Program.

Figure 3 Unique Attestations per Program Year

Program Year	EP	EH
2011	775	50
2012	415	43
2013	234	5
2014	218	2
2015	177	0
2016	200	11
Total	**2019**	**111**

The following figures present the incentive counts and amounts over the course of the program for both EPs and EHs.

Figure 4 EP and EH Incentive Payment Counts

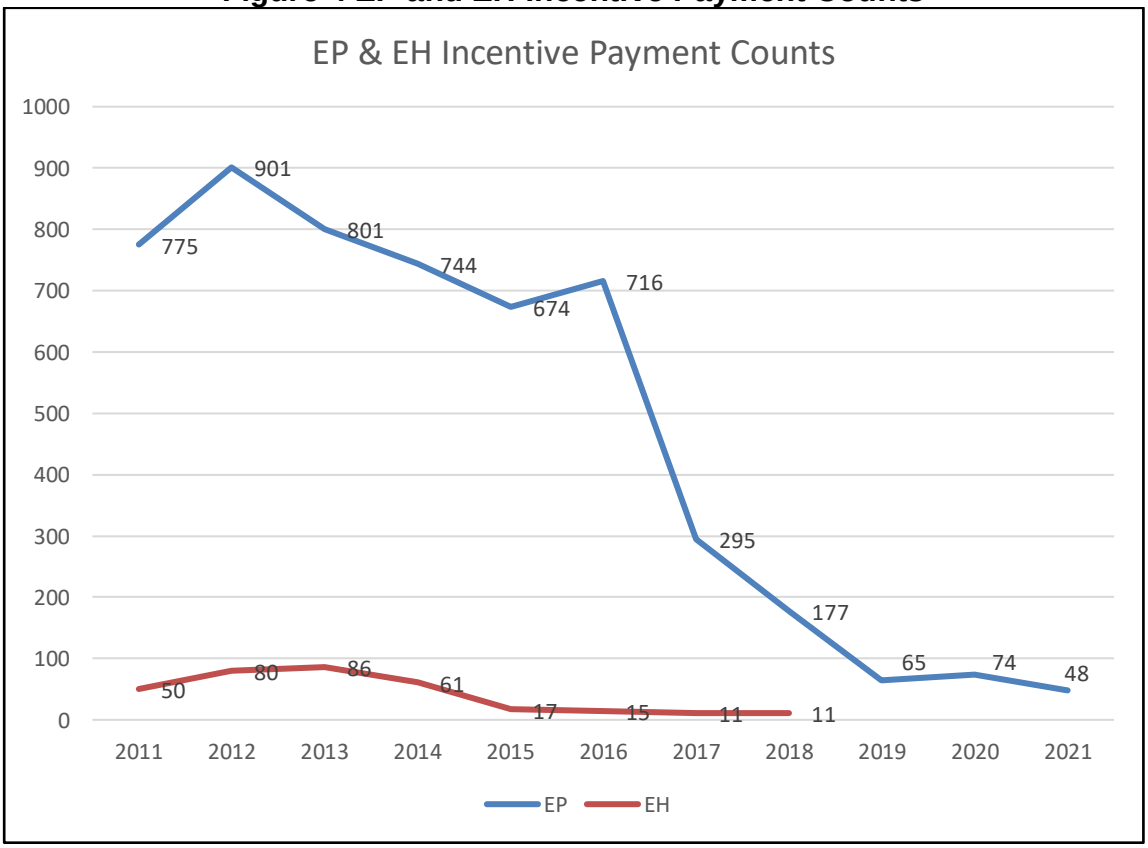
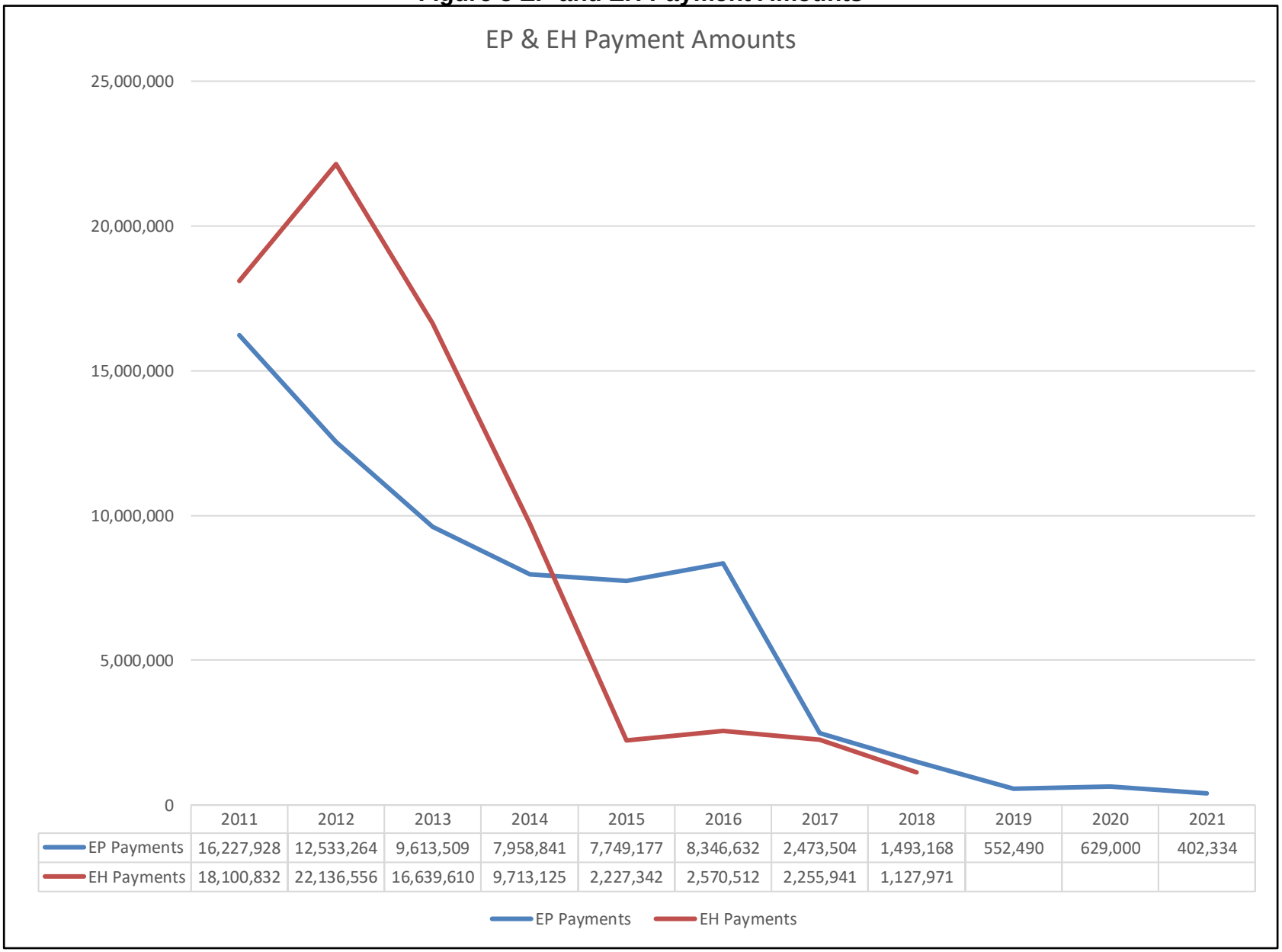


Figure 5 EP and EH Payment Amounts



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EP Payments	16,227,928	12,533,264	9,613,509	7,958,841	7,749,177	8,346,632	2,473,504	1,493,168	552,490	629,000	402,334
EH Payments	18,100,832	22,136,556	16,639,610	9,713,125	2,227,342	2,570,512	2,255,941	1,127,971			

Figure 6 Eligible Provider PI Program Return Rate

Provider Type	Provider Count (Pay Year 1)	Provider Count (Pay Year 2)	% Pay Year 2 / Pay Year 1 Return Rate	Provider Count (Pay Year 3)	% Pay Year 3 / Pay Year 2 Return Rate	Provider Count (Pay Year 4)	% Pay Year 4 / Pay Year 3 Return Rate	Provider Count (Pay Year 5)	% Pay Year 5 / Pay Year 4 Return Rate	Provider Count (Pay Year 6)	% Pay Year 6 / Pay Year 5 Return Rate
Certified Nurse - Midwife	38	24	63.16%	20	83.33%	14	70.00%	9	64.29%	5	55.56%
Dentist	266	8	3.01%	4	50.00%	2	50.00%	1	50.00%	0	0.00%
Doctor of Optometry	2	0	0.00%								
Nurse Practitioner	475	296	62.32%	208	70.27%	148	71.15%	95	64.19%	68	71.58%
Physician	1,119	728	65.06%	562	77.20%	486	86.48%	350	72.02%	267	76.29%
Physicians Assistant practicing in FQHC or RHC led by a PA	22	17	77.27%	13	76.47%	10	76.92%	8	80.00%	6	75.00%
Totals for All Providers	**1922**	**1073**	**55.83%**	**807**	**75.21%**	**660**	**81.78%**	**463**	**70.15%**	**346**	**74.73%**

The breakdown of the number of AIU and MU counts and payments per year can be seen in figure 6, while figure 7 illustrates the dollar amount of incentives by provider type for adopting, implementing or upgrading to CEHRT and for Meaningful Use.

Figure 7 Medicaid incentive payment for AIU and MU

	EP				EH			
	AIU		MU		AIU		MU	
Year	Count	Amount	Count	Amount	Count	Amount	Count	Amount
2011	775	$16,227,928	0	$0	50	$18,100,832	0	$0
2012	412	$8,577,923	489	$3,955,341	38	$8,040,791	42	$14,095,764
2013	229	$4,823,751	572	$4,789,758	4	$715,043	82	$15,924,567
2014	121	$2,394,167	623	$5,564,674	0	$0	61	$9,713,125
2015	155	$3,244,167	519	$4,505,010	0	$0	17	$2,227,342
2016	175	$3,662,084	541	$4,684,922	0	$0	15	$2,570,512
2017			295	$2,473,504			11	$2,255,941
2018			177	$1,493,168			11	$1,127,971
2019			65	$552,490				
2020			74	$629,000				
2021			48	$402,334				

Figure 8 Payments by Eligible Professional (EP) provider type

	AIU TOTAL		MU TOTAL	
Provider Type	Count	Payment	Count	Payment
Physician	1084	$22,418,770	2427	$20,609,327
Pediatrician	168	$3,102,520	833	$6,741,961
Nurse Practitioner	456	$9,562,500	837	$7,267,500
Certified Nurse - Midwife	38	$807,500	70	$595,000
Dentist	266	$5,652,500	15	$127,500
Physicians Assistant practicing in FQHC or RHC led by a PA	22	$467,500	54	$450,500
Hospital *Hospital payments are rounded to nearest dollar	92	$26,856,667	239	$47,915,223

The IME chose to break out hospital incentive payments into the minimum allowed number of payments, three, and paid the incentives at a 40/40/20 split across the three years. There are six hospitals which did not participate in the Medicaid Promoting Interoperability Program. All but two hospitals who entered the program received all three years of incentive payments.

Figure 9 Hospital Participation

Hospitals	
0 Medicaid Payments Received	6
1 Medicaid Payment Received	111
2 Medicaid Payments Received	111
3 Medicaid Payments Received	109

The maps below show payments made to providers and hospitals across the State of Iowa as of December 2021. All payments are complete for the program.

Figure 10 Map of Medicaid Eligible Provider EHR Incentive Payments by County

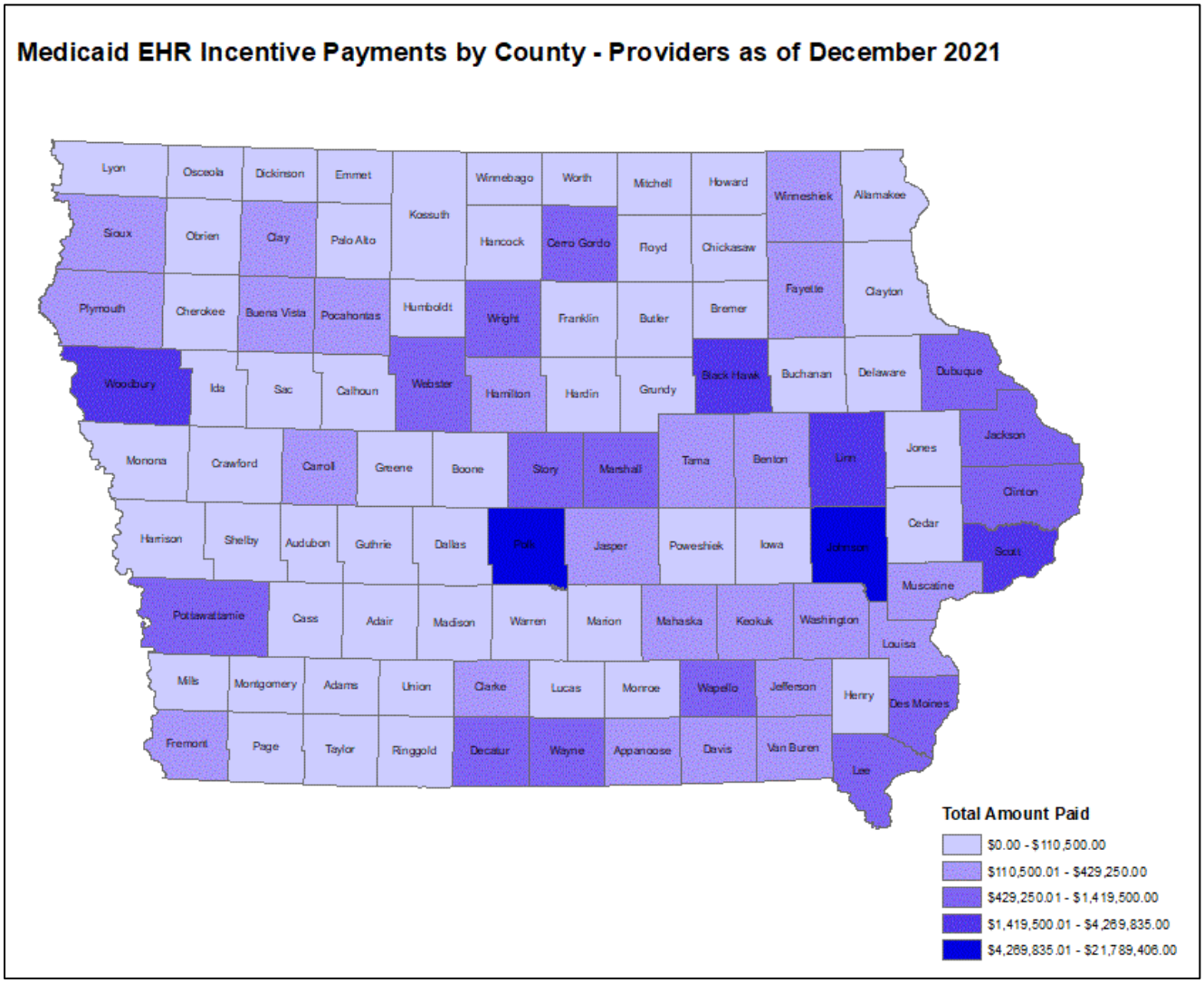
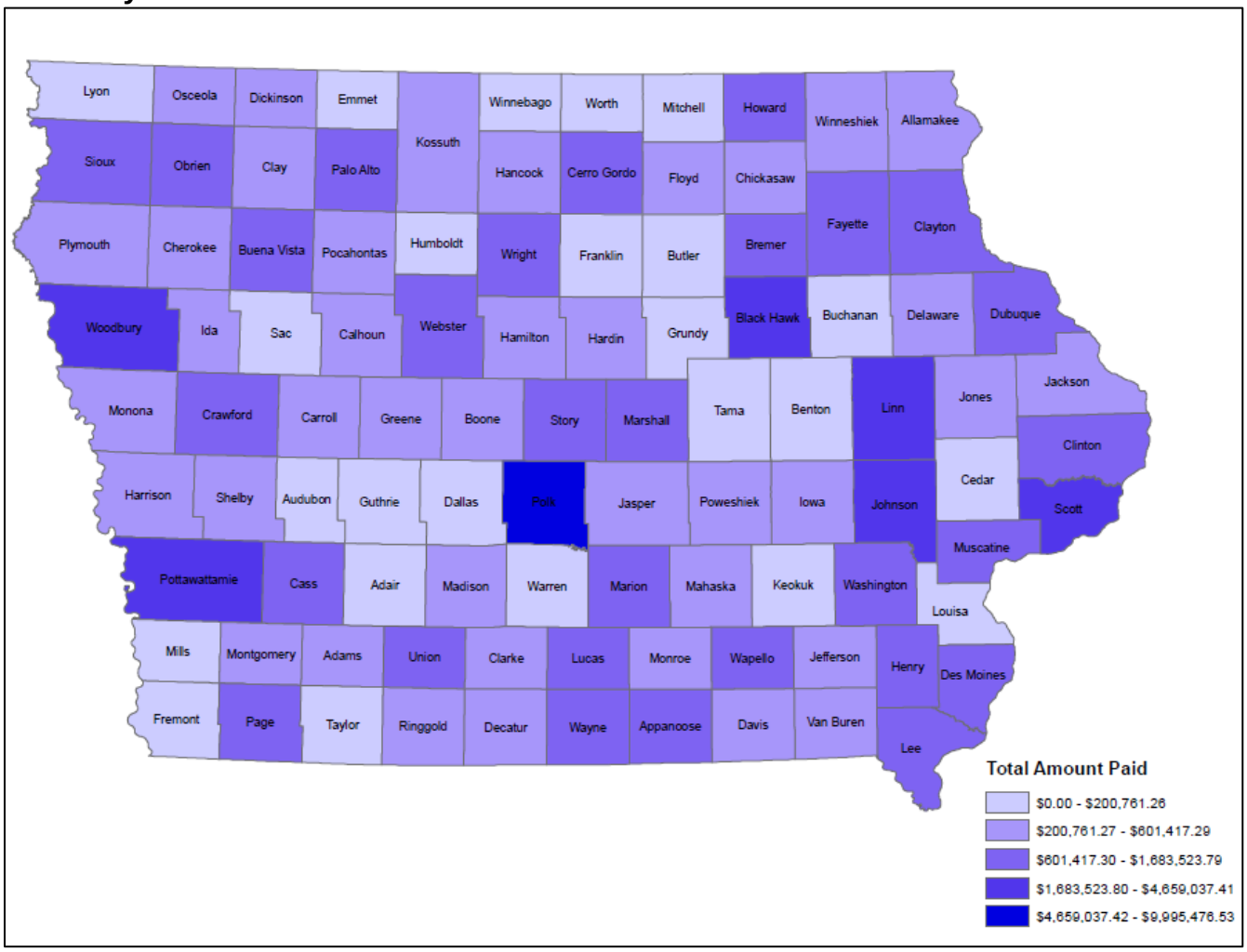


Figure 11 Map of Medicaid Eligible Hospital EHR Incentive Payments by County



2.1.3 CEHRT Used in Iowa

Providers have attested to the Iowa Medicaid Promoting Interoperability Program with 233 different CMS EHR Certification IDs over the years, however, just ten were used by providers attesting to using 2015 CEHRTs.

Table 1 2015 CEHRT Used in the Iowa Medicaid Promoting Interoperability Program

2015 CEHRT Developer	Number of Providers Attesting with 2015 CEHRT
Allscripts	1
athenahealth, Inc.	20
Cerner Corporation	6
CPSI	4
Credible Behavioral Health, Inc.	4
Epic Systems Corporation	201
Greenway Health, LLC	6
MEDITECH	43
NextGen Healthcare	17
P.AN.D.A Queen City Code Factory	1
Total	**303**

2.2 Broadband Access

Iowa continues to have challenges with broadband access with about one third of Iowa's counties being broadband deserts.[11]

2.2.1 Broadband and the Office of the Chief Information Officer (OCIO)

The State of Iowa Office of the Chief Information Officer administers broadband programs designed to increase access to high-speed Internet services in underserved and unserved areas of the State of Iowa.[12] Three main programs are coordinated by the Office to support broadband initiatives:

- Broadband Grants Program
- Broadband Property Tax Exemption Certification
- Broadband Map

[11] https://governor.iowa.gov/basic-page/creating-universal-broadband-access-for-iowans

[12] Information regarding Iowa's OCIO and broadband, including maps: https://ocio.iowa.gov/broadband

2.2.1.1 Iowa Broadband Maps

The OCIO maintains the State of Iowa Broadband Availability map. The map identifies locations and availability of broadband service in the State of Iowa.[13] The OCIO also maintains a broadband mapping archive.[14]

2.2.2 Iowa HF772 - Empower Rural Iowa Act

The Empower Rural Iowa Act provides incentives for Broadband and workforce housing. It was signed into law May 2019.

The OCIO administers a broadband grant program designed to reduce or eliminate unserved and underserved areas in the state, leveraging federal funds and public and private partnerships where possible, by awarding grants to communications service providers that reduce or eliminate targeted service areas by installing broadband infrastructure that facilitates broadband service in targeted service areas at or above the download and upload speeds specified in the definition of targeted service area.

The broadband infrastructure grant program is authorized in Iowa Code section 8B.11. Grants are awarded to communications service providers on a competitive basis. More information regarding the grant program can be found on the OCIO webpage.[15]

2.2.3 USDA Broadband ReConnect Loan and Grant Program[16]

In March 2018, Congress provided $600 million to USDA to expand broadband infrastructure and services in rural America. On December 12, 2019, U.S. Secretary of Agriculture announced the availability of a second round of funding under the ReConnect Program. In February 2021, USDA codified the program's policies and procedures in a published ReConnect Program Regulation.[17] The ReConnect Program offers unique federal financing and funding options in the form of loans, grants, and loan/grant combinations to facilitate broadband deployment in areas of rural America that don't currently have sufficient access to broadband to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas. Sufficient access is defined as fixed terrestrial broadband service at 100 Mbps (megabits per second) downstream and 20 Mbps upstream.

Award announcements information can be found on the USDA Announcements webpage.[18] Iowa counties mentioned in prior award announcements include Mitchell, Cherokee, Wapello, Howard, Chickasaw, Taylor, Page, Appanoose, Davis, Iowa, Johnson, Arcadia, and Carroll; and mentions of awards in southern and northern Iowa.

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[13] Broadband Availability Map https://ocio.iowa.gov/broadband-availability-map-version-4
[14] Broadband Mapping Archive https://ocio.iowa.gov/broadband-mapping-archive
[15] Empower Iowa Rural Iowa Broadband Grant program https://ocio.iowa.gov/broadband-grants
[16] More information on USDA ReConnect Loan and Grant Program https://www.usda.gov/reconnect
[17] Rural eConnectivity Program https://www.regulations.gov/document/RUS-20-TELECOM-0023-0001
[18] USDA Reconnect Announcements https://www.usda.gov/reconnect/announcements

2.2.4 BroadbandNow

BroadbandNow is a website built to assist consumers find and compare Internet service providers in their area. BroadbandNow takes multiple data sets and combines them together to build a public Internet service database online. BroadbandNow provides maps with Iowa data and statistics on their website.[19]

2.2.5 Connected Nation Iowa[20]

Connected Nation Iowa is a subsidiary of Connected Nation and operates as a non-profit in the state of Iowa. CN Iowa partnered with the Iowa Public Service Commission to engage in a comprehensive broadband planning and technology initiative as part of a national effort to map and expand broadband. The program began by gathering provider data to form a statewide broadband map and performing statewide business and residential technology assessments but has since progressed to working with communities on community plans. Bolstered by benchmarking data that has been gathered through Connected Nation's mapping and market research, the Connected Community Engagement Program (Connected[SM]), is drilling down to the regional and local level to facilitate community technology planning. CN Iowa maps are available on the website.[21]

2.2.6 Iowa Communications Network (ICN)[22]

The Iowa Communications Network (ICN) provides high-speed flexible broadband Internet, data, video, voice (phone), and security services to authorized users, under Code of Iowa, which includes: K-12 schools, higher education, hospitals and clinics, state and federal government, National Guard armories, and libraries. The ICN's strategic plan is posted on the website for 2018-2022.[23]

2.3 Health Information Technology and Health Information Exchange

This section includes and describes the following topics:

- Stakeholder Engagement and Relationships in HIT/E (governance, fiscal, geographic scope, etc.)
- HIT/HIE organizations, activities, and adoption within the state and surrounding state borders
- Role and relationships of the State Medicaid Agency (SMA) and Medicaid Enterprise Systems (MES) with HIT/HIE
- Use of MU capabilities/HITECH systems to achieve state health goals

[19] BroadbandNow Iowa information https://broadbandnow.com/Iowa
[20] Connected Nation Iowa https://connectednation.org/iowa/about/
[21] Connected Nation Iowa maps https://connectednation.org/iowa/state-mapping/
[22] Iowa Communications Network https://www.icn.iowa.gov/
[23] ICN's strategic plan https://icn.iowa.gov/about/agency-reports

2.3.1 Iowa Health Information Network (IHIN)

Iowa has had one state-wide designated health information exchange, called the Iowa Health Information Network, or IHIN. The IHIN has resided under two different models as described below. As of January 2021, IHIN is doing business as CyncHealth.

2.3.1.1 Government-led Model

The previous governance model (2008 – March 31, 2017) was part of the Iowa e-Health initiative and is best described as a government-led model with accountability to a multi-stakeholder, public-private e-Health Executive Committee and Advisory Council. The governance structure was established by a comprehensive health reform bill (HF 2539, 2008 Iowa Acts, Chapter 1188).[24] Under this model, the IHIN resided within the Iowa Department of Public Health (IDPH). The legislation specified nine organizations be represented on the Executive Committee and eight organizations represented on the Advisory Council. Additional members of the Advisory Council were appointed by the Director of the Iowa Department of Public Health.

2.3.1.2 Non-Profit Entity Model

The IHIN governance model through Iowa Code 135D was enacted March 31, 2017; which specifies that the IHIN non-profit designated entity is governed by a board of directors.[25] The legislation specifies the board composition which includes the Iowa Medicaid Director, or designee; and Director of Public Health, or designee; one member who is a consumer of health services; and a majority of the voting members of the board shall be representative of participants in the Iowa health information network. The board of directors appoint a CEO to manage the daily affairs of the IHIN.

2.3.1.3 IHIN dba CyncHealth Iowa

In January 2021, the Boards of Directors of both Nebraska Health Information Initiative (NEHII) and Iowa Health Information Network (IHIN) announced a partnership. Under the arrangement NEHII will continue all services of IHIN, as IHIN remains the state designated entity.[26] CyncHealth offers syndromic surveillance for Iowa among other services.[27]

2.3.1.4 IME's Participation and Engagement with CyncHealth

Per Iowa Code 135D, the Iowa Medicaid Enterprise Director, or designee, is a voting member of the CyncHealth Iowa board of directors; and attends board meetings.

The IME continues evaluating its role in helping to sustain the health data utility model of CyncHealth and participation through service offerings and functionalities within the health data utility which will drive Medicaid-specific outcomes.

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[24] House File 2539 https://www.legis.iowa.gov/legislation/BillBook?ga=82&ba=HF2539
[25] Iowa Code 135D https://www.legis.iowa.gov/docs/code/135d.pdf
[26] CyncHealth and IHIN Announce Partnership https://cynchealth.org/news/
[27] CyncHealth https://cynchealth.org/about/iowa/

2.4 State Medicaid Agency MMIS and HIT/E Relationships

The Agency currently owns and maintains multiple systems and interfaces that facilitate the processing of Medicaid Member benefits and Medicaid administrative functions. The core MMIS legacy mainframe system continues to support the majority of Medicaid processing.

2.4.1 Current Medicaid Information Technology Architecture

The IME submitted a Planning Advanced Planning Document (PAPD) as part of Modernizing the Exchange of information within the Medicaid Enterprise (MEME project) to CMS during 2021. The PAPD will start with a focus on provider outcomes and meeting the CMS interoperability requirements.

The Agency envisions implementing a flexible and modular MMIS that supports both Managed Care and Fee-for-Service (FFS) processes across the evolving health care landscape; serves as an enterprise payment, invoicing, and collection module; and provides the foundation for improved health outcomes and quality of care for Iowans.

2.4.1.1 Items Related to Promoting Interoperability Program

Iowa Medicaid providers and hospitals have adopted and implemented EHRs and have been incentivized to do so through the Iowa Medicaid Promoting Interoperability Program. Provider and hospital adoption of EHR's have the potential future benefit to IME as health information exchange capabilities are realized and use cases are discovered.

2.4.2 SMA HIT/E Relationships with Other Entities

As health information exchange adoption grows within the state of Iowa and across the country, the IME will consider opportunities to connect and/or utilize services where applicable.

HIT initiatives are an important part in improving public health data quality and timeliness of provider reporting. The IME has ongoing HIT relationships with IDPH, who has helped to connect Medicaid providers to public health registries. The registry connections have assisted Medicaid providers in meeting the requirements of the Promoting Interoperability Program. HITECH funding has been used to build and/or connect to the various public health registries.

Future opportunities for health information exchange and data sharing exist between the two agencies, as many times the Medicaid and Public Health programs are serving some of the same members of the population. In May 2021 Iowa Director of Public Health and Iowa Department of Human Services, Kelly Garcia, announced an alignment initiative between the two departments.[28]

[28]Iowa Health and Human Services Alignment https://hhsalignment.iowa.gov/

The IME continues conversations with the state designated entity, CyncHealth, to determine use cases of the health data utility that will benefit Medicaid.

2.5 SMA's Relationship to the State HIT Coordinator

The IME has a State Health Information Technology Coordinator for the SMA which is through an IME contracted resource. The contractor oversees the Promoting Interoperability Program and coordinates with policy and other contractors involved in the Promoting Interoperability Program to achieve program and contract deliverables. The IME's HIT Coordinator resource is accountable for tracking overall progress of and updating the IME's SMHP and the HIT Implementation Advance Planning Document (IAPD). The HIT Coordinator oversees the Promoting Interoperability Program. Activities included in PI Program oversight include pre-pay audit, post-pay audit, and state level repository PIPP system updates.

2.6 State Borders and Health Information Technology or Exchange

Iowa shares borders with Minnesota, Wisconsin, Illinois, Missouri, Nebraska, and South Dakota.

Iowa Medicaid has beneficiaries who could receive healthcare outside of the state. Such examples could include rural areas of the state lying along the border with beneficiaries seeking specialty care, such as in South Dakota. Other major cities which border the state such as Sioux City, Omaha, the Quad Cities, etc.; IME expects that there would be crossing of state lines for care. Minnesota borders Iowa to the north, and IME would expect that for some specialty care instances, members would seek care at Mayo Clinic.

The Iowa Prescription Monitoring Program is actively working on interstate connectivity and interoperability. Iowa's PMP is connected with all contiguous states, with the exception of NE; and with 32 states, including DC, PR and the DoD. The PMP continues to pursue connectivity with NE, to achieve all contiguous interstate connectivity. The Iowa PMP is capable of sharing through either national hub, RxCheck[29] or PMP InterConnect.[30] California and Nebraska are currently the only states in the US that are not sharing via PMP InterConnect.

The IME will continue to monitor HIE adoption within our borders and neighboring borders. IME expects that once the Trusted Exchange Framework and Common Agreement is implemented, connectivity between providers, patients, payers, and others will be more prevalent for all who choose to participate. Connectivity and interoperability may also rapidly expand through the HL7 FHIR use cases and policies implemented which support the use cases.

[29] RxCheck https://www.pdmpassist.org/RxCheck
[30] National Association of Boards of Pharmacy PMP InterConnect https://nabp.pharmacy/members/pmp-interconnect/

2.7 State Immunization & Public Health Surveillance

The Iowa Department of Public Health has maintained a Promoting Interoperability Program, formerly Meaningful Use, website[31] where providers can find the status of Public Health registries and readiness for Meaningful Use reporting options. IDPH maintains the web page as the authoritative source of all public health reporting options supported by IDPH in Iowa. The page is updated as needed. IDPH provides links within the page with information on how to register and informative steps to connect to the registries.

IDPH registry readiness includes the following:

- Immunization
- Electronic Lab Reporting
- Electronic Case Reporting
- Cancer
- Newborn Screening
- Prescription Drug Monitoring Program
- Syndromic Surveillance

2.7.1 Process for Public Health Data Registry Collection via HIE

- Immunization: Immunization exchange is a direct connection between the provider and the Iowa Immunization Registry Information System (IRIS). Bi-directional exchange and integration are available. As of October 2021, over 1,200 health care providers have bidirectional connections in place with IRIS.
- Electronic Lab Reporting (ELR): Approximately half of ELR is a direct connection from the laboratory to the Department. The other half connect through CyncHealth, where the lab messages are sent and are translated through the Persivia SmartLab and then sent to the Department.
- Electronic Case Reporting (eICR): Capacity is being built for this. It does not flow through CyncHealth, but Direct Secure Messaging may still be utilized.
- Cancer: The State Health Registry of Iowa/Iowa Cancer Registry is working with IDPH to assist healthcare providers meet Promoting Interoperability Program objectives in Iowa.
- Newborn Screening: Newborn screening can be sent with an ADT message through CyncHealth, direct connection to the Department or data entry.
- Prescription Monitoring Program (PMP): Iowa providers can either access the Iowa PMP through an AWARxE account, which is free to register and use for all Iowa providers and their delegates; or through an integrated EHR/EMR or pharmacy dispensing system (PDS), if their entity is integrated. Integrated users have access to data in the other states that Iowa shares data with. The PMP provided some funding through competitive grants to help entities cover the costs of integration.

[31] For more information on Iowa Department of Public Health registries for the Promoting Interoperability Program https://idph.iowa.gov/InformationManagement/meaningful-use

3 Section B: Iowa's "To-Be" HIT Landscape

3.1 Overview

Iowa's "To-Be" HIT landscape describes the health information technology and exchange vision and goals the IME expects to achieve over the next five years. It also includes summarized findings from the full environmental scan report.

3.2 Environmental Scan Summarized Findings and Actionable Follow Ups

Looking back over the time period since HITECH was enacted, it is clear that much progress has been made in EHR implementation, use, and the interoperability of health care data in Iowa. There is a need to continue to increase interoperability across the continuum of care, to address EHR vendor related data sharing issues, and to work toward a multi-state comprehensive HIE platform.

Objectives of HITECH and the Iowa Medicaid Promoting Interoperability Program included improving care, advancing coordination across healthcare, and realizing administrative efficiencies to contain healthcare costs. Although progress has been made, more work is needed to improve interoperability to realize the full return on HIT investment in areas such as reducing hospital readmissions and avoidance of repeat testing. Continued progress toward interoperable EHR use for all Iowa providers is needed to address gaps in data sharing and integration.

The environmental scan performed during 2021 shows that EHRs have been adopted and are in use by Eligible Providers (EPs) and Eligible Hospitals (EHs) who participated in the Iowa Medicaid Promoting Interoperability Program. The Federal strategic plans and rules guide HIT developments in Iowa. Specifically, ONC's 21st Century Cures Act and CMS' Interoperability and Patient Access rules, which impact interoperability, will continue to drive interoperability initiatives forward in Iowa. As the TEFCA is implemented it will provide the IME more guidance on both data and technical governance and legal governance, and a broad data sharing path forward. Implementations of APIs for both payers and providers through various regulatory requirements are assisting in moving interoperability of health information forward.

Iowa's HIT/HIE gaps and opportunities noted in the environmental scan include:

- Interoperable EHR use must extend across the continuum of care
- Providers will not be able to turn off the fax machines until all providers in the continuum of care are connected to interoperable platforms
- Only EPs and EHs qualified for EHR incentives
- Even the providers who have fully interoperable EHR capabilities must use manual processes to communicate with other providers who do not have EHRs
- Providers and payers are not contributing financially nor routinely using the state HIE
- Iowa hospitals, providers and state government stakeholders would like to have an HIE that is used by most Iowa medical providers and can be a single source of health information for Iowans

- The value proposition for the HIE remains the same today as it did at the start of the State HIE Cooperative Agreement Program in 2009: the ability to securely exchange patient information throughout the continuum of care will improve the value of the statewide HIE as more complete patient information becomes accessible electronically
- Health information exchange in Iowa is not operating as intended
- Many Iowa provider practices and hospitals use proprietary vendor-based EHR products to share patient data. Currently CyncHealth is not widely used by providers and payers which limits the amount of information available and leads to concerns about the financial sustainability of the HIE in Iowa
- Patients have only limited access to their information
- Patients receiving care from various organizations will still find that information remains fragmented across unaffiliated providers. Although patients may access their information from each separate provider, this information is not available through a single portal or access point
- Important data are not flowing freely
- Hospital and provider practice EHRs capture a broad range of patient data; however, there is wide variation in the types of data from outside organizations that can be integrated as data into these hospital and practice EHRs. Lack of integration limits the usefulness of the shared data

Interviews were conducted with state government officials for the environmental scan. They indicated their willingness to work to increase the level of health/healthcare data sharing within the state as a convener and an arbiter of standards. The Iowa OCIO can define standards for data use of PII vs. aggregated information to improve privacy thus taking the pressure off the individual agencies to develop these standards.

Recommendations for Actionable Follow-Up

- Identify HIE use cases for state government, since our interviews with state officials indicated a desire to access summary information to manage medical resources and improve population health
- Standardization of data through the USCDI
- Expand capability to deploy HL7 FHIR APIs
- Develop a business model and strategic direction for HIE that will work in the long-term
- Data sharing across EHR and HIE products and organizations
- Identify HIE use cases for state government
    - Interviews with state officials indicated a desire to access summary information to manage medical resources and improve population health
- Iowa providers and hospitals are making progress in enabling patients to access their data via a portal and/or APIs
- Build on the progress of consumer empowerment by placing more patient data in the hands of patients

The IME's focus remains on managed care implementation and onboarding, MMIS modernization with a modular approach, improved data analytics, improving member healthcare outcomes, alternative payment models, and meeting interoperability regulations.

3.3 IME- Five Year Goals

3.3.1 Medicaid Information Technology Architecture To-Be

Modernize Iowa Medicaid infrastructure

- Maximize efficient use of resources through improved business process design, functional based team collaboration, and integrating modern technology solutions.
- Federal approval of advanced planning documents for Medicaid modernization.
- Pursue technology solutions that support collaboration, data driven decisions, efficiency, and monitoring of program outcomes.
- Update team project structures to leverage resources within and outside of agency.

3.3.2 Issues to be addressed within the Next Five Years to Achieve Goals

The IME submitted a Planning APD (PAPD) as part of Modernizing the Exchange of information within the Medicaid Enterprise (MEME) project to CMS. The PAPD will start with a focus on program integrity and meeting the CMS interoperability requirements. Within the next five years the IME anticipates significant progress will be made towards the development of seamless and integrated systems that communicate effectively to achieve common Medicaid goals through interoperability and common standards with the MEME project. The challenges the Agency will have to overcome are summarized as follows:

- Lack of standards of MMIS modules and data models making it difficult to integrate and exchange data between modules.
- The Medicaid Program is changing and continues to become increasingly complex. Many changes are being discussed in Congress related to funding for the Medicaid Program
- The Agency continues to focus on the activities related to a managed care model.
- Data integrity through the transition to modern technology.
- System integration is iterative and ongoing. Enterprise solutions require monitoring, maintenance, and support. Changing business needs and technology require ongoing changes.

3.3.3 Other Issues which would need to be addressed to Achieve Broad Health Information Exchange and Interoperability

The following could assist the IME for broader health information exchange to occur and be more viable

- Build Additional Infrastructure – broadband initiatives impact rural Iowa for improved capabilities for health information technology and exchange

- Develop and mature specific use cases which encourage and benefit provider and payer participation in exchanging health information
- Standardized Data Governance and Legal Governance to establish trust
- Continued standards development and implementation across health information technology
- Continued development and implementation of standardized quality measures and electronic reporting practices
- Policy/Regulation
- Participation
- FHIR use case expansion and adoption of standards

3.4 Health Information Exchange to Achieve IME's HIT/E Goals and Objectives

ONC's 21st Century Cures Act: Interoperability, Information Blocking, and the ONC Health IT Certification Program rule was published May 1, 2020; as well as CMS' Interoperability and Patient Access rule. The IME looks to federal regulation and implementing the requirements as prescribed and using the FHIR implementation guides to increase interoperability and health information exchange. As FHIR use cases are expanded and implemented through policy, the IME will continue to meet these requirements.

The IME continues to consider infrastructure built under HITECH for potential use in the future as it applies to the Medicaid agency. As the TEFCA are finalized, they will provide the IME more guidance on both data and technical governance and legal governance, and a broad data sharing path forward.

4 Section C: Iowa's EHR Incentive Payment Program

4.1 Overview

This section describes the timeline and activities needed to conclude the Promoting Interoperability Program. The following figure provides a timeline of activities the IME program staff will perform to sunset the program.

Figure 12 Promoting Interoperability Program Close Out Activity Schedule

Task Name	Finish
Program Close Out Activity Schedule	**9/30/2022**
Administer EHR Incentive Program	**6/30/2022**
Incentive Payments Complete	12/31/2021
Perform Provider Outreach	1/31/2022
Audit	**6/30/2022**
Prepayment	12/21/2021
Post Payment	6/30/2022
Track Recoupments and Appeals	6/30/2022
PIPP SLR System	**9/30/2022**
Maintain System	6/30/2022
NLR Diconnect	9/30/2022
Decommission System	9/30/2022
Perform HIT Program Administration	**9/30/2022**
CMS Reporting	**8/31/2022**
CMS Quarterly Report	**7/30/2022**
Submit Q1 Quarterly CMS Report	1/30/2022
Submit Q2 Quarterly CMS Report	4/30/2022
Submit Q3 Quarterly CMS Report	7/30/2022
CMS Annual Report	**5/30/2022**
Submit Annual CMS Report	5/30/2022
SMHP	**3/31/2022**
Final Environmental Scan	12/31/2021
Submit Final SMHP Updates	3/31/2022
IAPD Updates	**8/31/2022**
Submit Final Program IAPD Updates	8/31/2022
Update DHS HIT and Promoting Interoperability Website	6/30/2022
Archive Program Information for Historical and Auditing Purposes	6/30/2022

5 Section E: Iowa's HIT Roadmap

5.1 Overview

Iowa's HIT Roadmap provides a narrative pathway which describes the overall journey to achieving the To-Be vision (Section 3).

5.2 Description of Pathway

The IME's focus remains on managed care implementation and onboarding, MMIS modernization with a modular approach, improved data analytics, improving member healthcare outcomes, alternative payment models, and implementation to meet the interoperability rules.

The IME continues to be involved with discussions on electronic health information exchange. The IME's Medicaid Director is a board member of the state's designated HIE non-profit entity, CyncHealth, as directed by Iowa code 135D.

The IME will support the To-Be goals as outlined in Section 3 to Modernize Iowa Medicaid infrastructure:

- Maximize efficient use of resources through improved business process design, functional based team collaboration, and integrating modern technology solutions.
- Federal approval of advanced planning documents for Medicaid modernization.
- Pursue technology solutions that support collaboration, data driven decisions, efficiency, and monitoring of program outcomes.
- Update team project structures to leverage resources within and outside of agency.

By:

- Working to modernize and transform Medicaid Enterprise Systems
- Supporting Health Information Exchange:
- Implementations to meet interoperability requirements
- Iowa code 135D
- Discover use cases to re-use infrastructure built under HITECH

5.2.1 Modernizing and Transforming the Medicaid Enterprise Systems

The IME's HIT Roadmap focuses on modernizing and transforming the Medicaid Enterprise Systems, so it is capable of achieving the To-Be goals: The IME is starting from the As-Is state with an antiquated MMIS system. The future state entails fully replacing a large number of legacy systems and interfaces, creating a member portal, and a robust enterprise data warehouse. With data and analytics maturity, the IME will improve capabilities to perform predictive modeling, risk analysis and mitigation, and data for strategic planning.

The IME submitted a Planning APD (PAPD) as part of Modernizing the Exchange of information within the Medicaid Enterprise (MEME) project to CMS. The PAPD will start with a focus on provider outcomes and meeting the CMS interoperability requirements.

5.2.1.1 Modernizing and Transforming MMIS Benchmarks

Key Performance Indicators (KPIs) and Benchmarks will be described through the MEME project and associated PAPD updates.

5.3 Evolving HIT/E Roadmap

At the Federal level, there have been efforts of alignment of the Promoting Interoperability Program, quality measures through the Meaningful Measures Framework, and continued efforts to reduce administrative burden. Overall, health information exchange is making advancements through HL7 FHIR implementation guides, the release of the TEFCA, ONC's final rule of the 21st Century Cures Act Interoperability, Information Blocking, and HIT Certification Program; and CMS' Interoperability and Patient Access final rule. National goals of interoperability are far reaching with not only specific providers sharing data who have been impacted by the Promoting Interoperability Program, but all healthcare providers, payers, clinical research access to health information, and ultimately the patient/beneficiary's access to their own health information. HIT/E are even further reaching as care coordination incorporates Social Determinants of Health. As the Trusted Exchange Framework and Common Agreement are implemented, they will provide the IME more guidance on both data and technical governance and legal governance; and a broad data sharing path forward. Implementations of APIs for both payers and providers through various regulatory requirements are assisting in moving interoperability of health information forward.

Over the past decade health information technology and exchange has evolved, and continues to evolve as technology advancements are made. With various rules being finalized and those which remain un-finalized, incorporating health information technology and exchange requirements within them, the Medicaid Enterprise Systems will continue to evolve to meet the policy requirements and purposely look to use cases which re-use HITECH infrastructure which benefit Medicaid.